

CLAIMS

We claim:

- Sub (17)
1. A load bearing assembly for use in an elevator system, comprising:
a plurality of elongated load bearing members;
a jacket at least partially enclosing the load bearing members; and
a plurality of detectable markings longitudinally spaced on at least one side of the jacket, the markings being at a first spacing along the side of the jacket when the assembly is in a first condition, the spacing between at least two of the markings changing responsive to a change in the condition of the assembly.
 2. The assembly of claim 1, wherein the markings are optically detectable.
 3. The assembly of claim 1, wherein the markings comprise indentations on the side of the jacket.
 4. The assembly of claim 1, wherein the markings are spaced with a controlled spacing between sets of adjacent markings.
 5. The assembly of claim 1, wherein the markings include a first plurality of first markings and a second plurality of second markings, the first markings being spaced relative to each other and the second markings being spaced relative to each other.
 6. The assembly of claim 5, wherein the first markings have a first configuration and the second markings have a second configuration that is different from the first configuration.
 7. The assembly of claim 5, wherein the first markings are spaced from each other longitudinally along the jacket and the second markings are spaced from each other longitudinally along the jacket and laterally offset from the first markings.

- (1) 8. The assembly of claim 1, wherein the jacket comprises a first color and the
694 markings are painted on the jacket and comprise a second color.

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9. A method of making a load bearing assembly for use in an elevator system, comprising:

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arranging a plurality of load bearing members in a selected alignment;
placing the load bearing members at least partially within a jacket; and
placing a plurality of markings longitudinally spaced on at least one side of the jacket such that the markings are spaced at a first spacing when the assembly is in a first condition and the spacing between at least two of the markings changes responsive to a change in the condition of the assembly.

10. The method of claim 9, including using a laser to apply the markings to the jacket.

11. The method of claim 9, including forming the jacket from a first material having a first property and making the markings by applying a second material to the jacket that has a second property that is distinct from the first material property.

12. The method of claim 9, including painting the markings on the jacket.

13. The method of claim 9, including placing a first plurality of markings having a first spatial relationship with each other and placing a second plurality of markings on the jacket having a second spatial relationship with each other.

14. The method of claim 9, including controlling the spacing between adjacent ones of the markings.

15. The method of claim 15, including using two lasers to apply pairs of the markings, the lasers being at a controlled spacing.

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(07) 16. A method of determining a condition of a load bearing assembly in an elevator system having a plurality of load bearing members within a jacket that includes detectable markings on at least one side of the jacket, comprising the steps of:

determining a current spacing between at least two of the markings; and
determining a current condition of the assembly using the current spacing of the markings.

17. The method of claim 16, including determining a baseline spacing under a controlled assembly load condition and using the baseline spacing and the current spacing to determine the current condition.

18. The method of claim 16, including determining a torque of a motor associated with the elevator system that provides a motive force to move the load bearing assembly and using the motor torque and the current spacing to determine the current condition.

19. The method of claim 16, including determining a change in spacing between selected ones of the markings along the length of the assembly, determining a changing in a load on the assembly and determining whether the determined change in spacing corresponds to the determined changing load.